From The Weekly Tribun Four of these caps have crowns made in the sam manner, or nearly so. They are the Tam o'Shanter, the Leonardo da Vinci, the Bective and the Bicycle. The Tam o'Shanter, is an excellent shape, and an casy pattern; and the crown would answer for all four, if proper allowance be made for the difference se in the needle used, and the difference between a tight and a loose worker, which has an immense influence in crochet, as in knitting. The favorite stitch is double crochet, which is worked throughput into both loops of the chain.

SAILOR'S OR FIREMAN'S CAP.



The sailor's or fireman's is a very pretty little aptation of these well-known caps, and is suitable forchildren's wear, or even for young ladies at tennis It is done in double zephyr, of a dark navy-blue color, and a large wooden crochet needle.

Make a chain of 8 stitches, join, and work 10 stitches into the ring in double crochet, then proceed onward in rounds, not rows. The second row work 2 stitches into every stitch, putting the hook through both stitches of the chain; then work for the 3d row 2 stitches into every third. The too conhistsof 14 rows, and requires to be increased with great care, so as to keep it perfectly flat. After the 14th row, when there should be 74 stitches, do 1 round plain, and begin decreasing for 4 rounds till there are 57 stitches : then 3 rounds of single crocket, 1 round of double crochet, and 2 more rounds of single crochet, which finish the band of the cap with 57 stitches as you began it. A silk ball or pompon is placed in the pentre of the crown.

NEAPOLITAN FISHERMAN'S CAP.



This cap is made of single zephyr wool, in strips of red and blue, and a No. 8 bone needle. The stitch is double crochet, the book being put through both stitches of the chain. The work is done in rows, and each stripe consists of six rows of the same color. The first stripe is blue.

Make a chain of 4 stitches, join, and work 12 double into the loop.

2d row: 2 stitches into each stitch. 3d row: Work 2 into every alternate stitch.

4th row: 2 into every third stitch.

5th row: The same.

7th row: Begin with red, and increase 4 stitches in each row. Increase very gradually henceforth keeping a pointed shape for six stripes, ending with red and beginning with blue; there should then be

The rest of the cap for eight alternates of blue and red rows is not increased. The 14th stripe is red. Then turn the cap round and work the other way round for the turn over in blue for 32 rows. Turn up balf of this length and iron flat. The top is finished by a thick tassel of red wool.



Use Germantown wool and a No. 11 book. This cap is also worked in rounds, not rows. Make a chain of 6 stitches, and work 10 stitches in treble crochet in the ring, then work round for 7 rounds of

As you begin the 6th round there sh stitches, before you finish the 7th round you must decrease 14 stitches, leaving 88. Then do 3 rows of open troble stitch, 2 chain, miss I loop, and finish off, leaving a straight edge. For the turned up part, then do a row of 79 treble' stitches, working the other way, and then floush in star or any other fancy pattern you prefer.



Materials: Two ounces Germantown wool and a small-sized bone crochet book.

1st row : Make a chain of 5, join into a circle 2d row: Double crochet, 2 stitches into each loop

3d cow: 2 treble in each loop, making 22 round. 4th row: Double crochet, taking the loop nearest 5th row: 32 treble, increase by working 2 treble

in every alternate loop. In this round the loop at the back of the preceding row is worked. 6th row: 2 treble in every alternate stitch, mak-

ing 48 round, work the loop next to join through-7th row: 64 treble, 2 stitches between the in

8th row: 80 treble, 3 stitches between the in-9th row: 96 treble, 4 stitches between the in

10th row: 112 treble, 5 stitches between the in-

11th row: 120 treble, 6 stitches; then increase miss 13, then increase, miss 13, and so on. This round completes the crown of the cap. Finish the ends of each row by drawing the loon

on the needle through the loop of the 1st treble. This loop must be drawn the same height as the For the band round the head: 12th tow: 120

double crochet; then 12 rounds of double crochet, taking the stitch through both loops of the chain Another round of double crochet finishes the depth of headband. On the chain above this last round work a row of

DG., also round the crown. These last 2 rows form a pretty finish to the cap, which must be lined with THE BECTIVE TAM O'SHANTER.



The shape of this cap is septangular, and the crown has the appearance of 7 divisions. The one we have seen is bright scarlet, lined with Turkey red; we subjoin directions for working it. Materials-Soz. to 4oz. of double zephyr wool, and

a middle-sized bone crochet hook. Make a chain of 7 loops, and join it into a circle.

2d row: Work round in double crochet, making 2 stitches in each stitch. 3d row: Work round, making 2 in every alternate

stitch. This makes the commencement of the 7 divisions. 4th row: Work round, making 2 at the first stitch of

each division, taking your stitch though both loops of the chain. Work round thus for 25 rows, taking care always to increase at the same place, which you will have

po difficulty in distinguishing. Work 2 plain rows and then 12 rows, decreasing

by omitting a stitch at the commencement of each

For the band round the head work 6 rows in double crochet, taking the stitch through both loops of the chain. Make a tuft of wool to sew on the

centre of the crown. To line the cap cut two septangular pieces the exect size of the crown, cut a circle the size round of the headband from the centre of one of them ; join these two septangular pieces, running round the onter edge : take a piece on the straight the length and width of the band, join it round where you cut the circle from ; you will find this a very easy way of adapting the lining to the shape of the cap.

A tight worker must work 27 rows instead of 25. and decrease 14; 8 or 10 for the band. The above directions are for a full-sized cap.

> STOCKING KNITTING, STRUMPFRÆNDER.

Of the pretty patterns or bands which the Ger man knitters work on the top of their stockings, a large variety are given in one of their popular manuals, entitled "Anweisung zur Kunft Strickerei," or instructions in the art of knitting. A few of these-"bands" have been translated, and will be found below. They can be used, of course, like other fancy patterns, for the lower part of the leg and instep, and some will also be useful in other and instep, knitted articles. sunbram Band.

Count 21 stitches.

1st round : 4 purl, narrow, 4 plain, over, 1 plain over, 4 plain, narrow (twist stitch) 4 purl. 2d round: 3 purl, narrow, 4 plain, over, 3 plain ver, 4 plain, narrow (twist stitch) 3 purl. 3d round: 2 purl , narrow, 4 plain, over, 5 plain over, 4 plain, narrow (twist statch), 2 purk 4th round: 1 purl, narrow, 4 plain, over, 7 plain

over, 4 plain, narrow (twist stitch), 1 pari. Repeat from 1st round. PYRAMID BAND. Count 6 stitches for each pattern. Ist and 2d rounds: 1 plain, 5 purl. 3d and 4th rounds: 2 plain, 3 purl, 1 plain.

5th and 6th rounds: 3 plain, 1 parl, 2 plain. 7th and 8th rounds: 3 purl, 1 plane, 2 purl. 9th and 10th rounds: 2 purl, 3 plain, 1 purl. 11th and 12th rounds: 1 parl, 5 plain. BASKET PATTERN.

Count 16 stitches.

1st and 2d rounds: Plain. 3d round: 5 twist, 11 purl. 4th, 5th and 6th rounds: Like the 3d. 7th and 8th rounds: Plain. 9th round: 8 purl, 5 twist, 3 purl. 10th, 11th and 12th rounds: Same as 9th.

SCRAP-BAG. AFGHAN.-L. J. M. kindly writes: In reply to M. S. B. I would say I have just finished an Afghan which may be what she desires, being neither Ro man nor in regular Afghan stitch. The colors are ecru and dark cardinal, the strips knit together with twisted cord. Pale blue and dark maroon is a pretty combination. Cast on 38 statches.

pretty combination. Cast on 38 statches.

1st row: Plain.

2d row: Purl.

3d row: 1 plain, wool three times around the needle all the way across; last stitch plain.

4th row: Purl 1, take off 6, pass left needle under first three stitches, passing them over the other three, and taking all 6 crossed on left needle, then purl them off. Repeat this six times, which leaves one on the needle to be purled. This makes six blocks wide.

For buly Aighan take 26 stitches, which makes four blocks wide, and for which you need 7 strips.

To knit strips together fasten them at the ends with both colors. Take one thread, crochet 3 chains, stretch it a little and catch edges together in single crochet; take the other thread and knit the same, remembering to bring the last chain in front of the other every time. Can any one tell me how to wash babies' knit shirts so they will not full up?

CAROLUS DURAN'S IDEAS ABOUT ART.

From The Whitehall Review Carolus Duran was born at Lilie, about nine-andthirty years ago, and has that striking aspect
which I have always remarked as being common to
all great artists—an aspect which I can only desertie as one expressing luminous originality. His
long black hair, now slightly tinged with gray, is
brushed back from an ample forehead, beneath
which two splendidly expressive eyes, brilliant,
penetrating, tender, and bold, gleam like two
stars. He received my congratulations with that
refined courtesy and cordial amiability which has
won him such success in the grande monde, and

such success in the grande monde, and n. par excellence, the fashionable portrait

udging from what one sees here, would have been a nodel worthy of a Volasquez; here are the foll-which all Paris has heard of, for it is a well-known model worthy of a velasquez, here are including which all Paris has heard of, for it is a well-known fact in the French metropolis that Carolus Duran is crazy about feneing, and here is the celebrated mammoth paletic—the largest palette ever artist used, I fancy—on which the reserved or wayward colors are toyed with, cajoied, and caressed multiple become reconciled one to another, and yield up the full secret of their united splandor. By degrees, as the breakfast-hour approached, M. Duran's friends and admiters took their leave and left us to our chat. The great artist is a victim to the charms of the goddess Nicotina, and it is with a cigarette between his lips that he begins.

"I always tell my publis first that the following is, in my opinion, the golden maxim which all who would succeed as artists should adopt: 'Love giory more than money, art more than glory, and nature more than art.' I am, unlike many artists, a disciple of nature."

more than money, art more than glory, and nature more than art. I am unlike many artists, a disciple of nature."

"But in the education of a painter, what is the most important step to take "I inquired.

"The education of the eye is the most important. Educate the eye before you educate the hand. The hand will become enuning soon enough when the eye has learnt to see, whereas if the hand be educated before the eye one may never see. Now, to my mind, all that is not indispensable in a picture is distinctly harmful. Redundancy is fatal. Everything should have its meaning, its place, and its distinct utility. There is ne such thing possible in a picture as a needless accuracy. When the accuracy is needless it does actual mischief to the whole. Then again, everything in a picture should be brought about naturally and not abruptly. To take a trivial illustration: Suppose I am teaching a pupil to paint a lady who is turning. I do not merely place the model in the middle of the room and make her turn. She must walk about for a while and then turn naturally. There is education for the eye in the preliminary stages, and one thus gets the full value of her turning posture."

"What, to your mind, is one of the most essential elements of a good picture." I asked.

"Air," anzwered Carolus Duran enthusiastically.

"Plenty of air! There can never be too much air in a picture."

"And color !" I suggested to the great colorist.

a picture."

"And color!" I suggested to the great colorist.

"Color, of course." he replied; "but did it never strike you how the greatest colorists have always come from the countries where there is compatatively but little color! It is not from the sunniest parts of Italy that we have the greatest masters of color. No; it is rather in comparatively gloomy climes that an artist feels the full value of colors. This is a curious tact, and if you look into art history you will find I am right."

"And an understanding of the full value and teaching embodied in a subject." I inquired.

"Ah, that is of the most vital importance to the artist. Tiens; for example, in the lessons I give my pupils I invariably point out all the meaning that can be extracted from a subject. Take the victims of Circe, as an instance. I show them the full lesson embodied in this story, and then tell them how to treat it, describe to them the worn-out debanchee, the sot, the glatton. It is not necessary that the companions of Ulysses should be depicted with snoats and tails to show the public that they have ceased to be men and have undergone some transformation."

"But one of our leading artists, Britton Riviere, treated that subject differently. He gave the pigs a human expression."

"That, to my mind, is not the proper treatment,"

reated that subject differently. He gave the pigs a human expression."

"That, to my mind, is not the proper treatment," replied Duran. "That savors nore of cariculture than of real art. The thing to do is to show that the men are pigs, not that the pigs are men."

"Your lectures must be most interesting reading."

I remarked.
"I have a file of them; I intend publishing them some day. They may be of service perhaps, to

After a few more words about the creat masters thy the way, Carolus Duran utterly despises idel of Vienna. Hans Mackarti I took my leave the greatest French colorist now living, and one the most charming and unaffected men whom Providence has ever endowed with genius.

A ludicrons mistake is reported to have occurre A ludicrons mistake is reported to have occurred at the opening of a bazaar in Glasgow, at which the Princess Louise and the Marquis of Lorne were present. A distinguished clergyman was called upon by the chairman to conduct devotional exercises; and the reverend gentleman had commenced to read, when four pipers of a Highland regiment, owing to some misinderstanding, struck pp with a wild shriek on the bagpipes, by way of a preliminary to "The Campbellis are Coming." The music was promptly stopped; but the solemnity of the proceedings had, of course, been shaken.

## SCIENCE FOR THE PEOPLE.

THE LUMINOUS CASCADE.

In an admirable series of articles by Lewis Wright, on "Optics with the Lantern," now appearing in The English Mechanic, this experiment illustrative of the total reflection of light is described: Get a two-necked glass receiver, about three and a half inches diameter, with about three and a hair inches diameter, with as large necks as possible, and in each neck fix by corks glass tubes of similar die, as large as possible, not less than three-capths inch clear bore, and one-half inch is better. Black-varnish all outside, except a circle three inches diameter, opposite the nozzle meant to be horizontal, and adjust this close against and pe norizontal, and adjust this close against and projecting into the lantern nozzle (the flange nezzle with the objective removed) on a wire tripod, filling with water first, and corking the tube in the horizontal nozzle till all is arranged. Several feet higher, fix some sort of supply tank (a bucket will do) with a bit of tube fixed by a cork in the bettem, and connect with the top nozzle by a flexible tube. Finally adjust the light at such distance from the condensers that the greatest possible amount is concen-trated into the space occupied by the emissionnozzle. Having adjusted all this, and filled the nozzie. Having adjusted all this, and filled the tank, remove the cock from the nozzle, and let the water stream out in a gentle curve into a bucket on the floor. The effect is beautiful, even on this small scale. The jet is like a stream of living fire; and if you have colored glasses and slip them alternately into the stream of living fire; and if you have colored glasses and slip them alternately into the ordinary sinde-stage of the lantern, you get blood-red, blue, or what color you desire. All this is owing to "total reflection." If the water did not issue, and the cork was replaced by a ground-glass stopper with flat polished ends, the light from the lantern would be thrown horizontally into the room. But it meets the stream of water on every side at much more than the angle of total reflection, and so it than the angle of total reflection, and so it cannot get out, but is redected from side to side cannot get out, our is reacted from all down the stream, making it brilliantly luminous by the small motes in the water. Put your hand in the jet and it is bathed in light—that light which cannot get out of the stream

MEASUREMENT OF RADIANT ENERGY. Among the European scientists light and heat have usually been regarded as essentially different things. Of late years, however, some observers have held that both were only different manifestations of radiant energy. By the use of a Rutherfurd grating and a deli-cate thermal balance, Professor Langley, of the Allegheny (Penn.) Observatory, recently the Aliegheny (Fenn.) Observatory, lecenty succeeded in obtaining for the first time full and exact measurements of the distribution of energy in a pure spectrum, where no lens of prism had been used, and of fixing its relative amount, as determined accurately by the wave-lengths of light in all parts of the visible received and in the ultra red. Mr. Langspectrum and in the ultra red. Mr. Lang-ley's paper will be found in full in Science. The essential result is of high theoretical interest. It is, that heat and light as received from the sun are new experimentally proved. so far as such measurements can prove it, to be in essence the same thing. The old delineabe in essence the same thing. The old delinea-tions of essentially different curves represent-ing heat and light must be banished hereafter from text-books. The old views on this sub-ject can no lenger be maintained even by Euro-pean men of science, who are prepossessed in their tavor. This result, fulfilling what was almost a prophecy when made, a quarter of a century ago, by the eider Draper, and being due largely to means which science owes to Mr. Rutherturd, may, it obtained, be most fairly claimed as largely due to the two Americans whose names have just been cited. be in essence the same thing.

except where you thus break it up.

ORGANIC GERMS IN THE AIR. M. Yung, of Geneva, lately read a paper to M. Yung, of Geneva, latery read a paper of the Helvette Society of Sciences on organic dust in the atmosphere. With recard to its influence on public health, he distinguishes two groups of particles, the spores of champignous of the of particles, the spores of champignons of the mould-group, and germs of mi ro-bacteria, the latter being the more important. In agreement with M. Miguel's observations at Montsouris, he observes a notable increase of germs during the hot months of summer and a decrease in winter. Oneting globes filled with neutralized bendless with regions of the particles of the second of the control of the boullon, quite sterilized by heat, on mountains, glaciers, the ocean, and the Mediterranean, in volcanic craters, and various other circum-stances, he has tound that in most cases ten to twenty cubic centimetres of air sufficed to in-troduce germs of organisms capable of growing and living in successive or simultaneous gen-erations, according to species. Two exceptions are noted; one being that of a globe open at Geneva after an abundant fall of snow; the bouillon remained quite clear, proving that snow for a time clears the air of germs. The other was that of a globe opened in an isolated nection between the number of atmospheric germs and the recurrence in the same place

TRON RUST IN BOILERS. The exidation of iron immersed in ordinary water, says Lagimering, appears to be largely due to two causes—namely, first the absorption of exygen contained in the water, and second. the absorption of exygen set free during the decomposition of the water, hydrogen being set free in the latter case. M. Lodin, who has made a number of experiments on the corresion of iron wires intreesed in water and various ments in the Compiles Hendus, has arrived at the conclusion that the first of the above causes of oxidation is generally of the chief importance. With both distilled and ordinary water the With both distilled and ordinary water the temperature has a very important influence. Thus at 68° Fahr, the quantities of oxygen absorbed per square foot of from surface per hour when immersed in distilled and calcareous waters respectively, were 0.258 grains and 0.330 grains, while at 212° the quantities rose to about 2.364 grains and 2.579 grains. The immersion of iron in all the waters tested was accompanied by the evolution of hydrogen, the action being least, however, in distilled water. At a temperature of about 260° Fahr, the decomposition of the water was found to be equicomposition of the water was found to be equivalent to the absorption of 0.01 grains oxygen per square toot of surface per hour for distilled water; 0.0129 grains for calcareous water; 0.0182 grains for water containing one fifth part of crystallized chloride of magne sium; 0.05 grains for water saturated with chloride of sodium; and 0.067 grains for sea

PENNULE'S COMET.

The comet discovered at Copenhagen by Pennule on December 16 was observed at Boston on the three following evenings, and from the positions thus obtained, Professor S.C.Chandler, jr., has computed approximately the ele-ments of its orbit, and gives also, in Science Observer, the following ephemeris for Washing-Observer, the following ephemeris for ton mean midnight, which observers will find useful in picking up the comet:

1380.	R. A.	Decl. N.	Brightness
1890—Dec. 27 1890—Fec. 31 1881—Jan. 4 1881—Jan. 8 1881—Jan. 12	h. m.s. 19 47.2 20 10.7 20 36.0 21 2.9 21 31.1	0 17 46 20 14 22 34 24 42 26 33	1.10 1.09 1.07 1.02

the middle of January. It is annually bris for a telescopic comet, presenting a round and very bright disc two minutes of are in diameter, with a most decided central condensa-tion, but no tail. It will increase somewhat in brightness until the end of December, and will doubtless remain visible, even in small telescopes, for many weeks to come.

PHASES OF VOLCANIC ACTION. In a paper in Nature, Professor Geikie com-ats the usually received idea that cones and craters are an absolutely necessary adjunct to volcanic action. He shows that the volcanoes and vents are not only necessary accompaniments of the discharge of lava from the earth's interior, but probably belong to a feeble or wanning degree of volcanic excitement. The novel idea which he propounds was suggested to him when recently travelling over the vast level lava fields of our Western States, with not a central cone in sight from which the great sea of basalt could have flowed. Riding after hour among these arid wastes. Professor Geikie became convinced that all volce phenomena are not to be explained by volcanie ordinary conception of volcanoes, but that there is another and grander type of volcanic action, where, instead of issuing from separate vents and piling up cones of lava and ashes around them, the molten rock has risen through I parent to every one.

in fissures, and has welled forth so as to flood the lower ground with successive horizontal sheets of basalt. Professor Geikie applies this theory to an explanation of the great lava field of Northwestern Europe, which must have found vent in those innumerable dykes which in the British Isles run from sea to sea, and the origin of which has never yet been satisfactorily explained. Subsequent denudation has for the most part removed the horizontal sheets which flowed from the cracks, while in some cases he thinks the eruptive matter never reached

THE COMMUNICATIVE ANT.

he thinks the eruptive matter never reached the surface at all, but only filed up the dykes to a certain level.

From a Paper by Sir John Lubbock.

I selected a specimen of Atta testaceo-pilosa, belonging to a nest which I had brought back with me from Algeria. She was out hunting about six teet from home, and I placed before her a large gead bluebottle fly, which she at once began to drag to the nest. I then pinned the fly to a piece of cork, in a small box, so that no ant could see the fly until she had climbed up the size of the box. The ant struggled, of course in vain, to move the fly. She pulled first in one direction and then in another, but, finding her efforts fruitless, she at length started off back to the nest empty handed. At this time there were no ants coming out of the nest. Probably there were some few others out hunting, but for at least a quarter of an hour no ant had left the nest. My ant entered the nest, but did not remain there; it less than a minute she emerged, accompanied by seven friends. I never saw so many come out of that nest before. In her excitement the first aut soon distanced her companions, who took the matter with much sang-froid, and had all the appearance of having come out reluctantly, or as if they had been askep and were only half

many come out of that nest before. In her excitement the first aut soon distanced her companions, who took the matter with much sang-froid, and had all the appearance of having come out reluctantly, or as if they had been asleep and were only half awake. The first ant ran on ahead, going straight to the fly. The others followed slowly and with many meannerings; so slowly, indeed, that for twenty minutes the first ant was alone at the fly, trying in every way to move it. Finding this still impossible, she again returned to the nest, not chancing to meet any of her friends by the way. Again she emerged in less than a minute with eight triends, and nurried on to the fly. They were even less energetic than the first party; and when they found they had lost sight of their guide, they one and all returned to the nest. In the meantime, several of the first detachment had found the fly, and one of them succeeded in detaching a leg, with which she returned in triumph to the nest, coming out again directly with four or five companions. These latter, with one exception, soon gave up the chase and returned to the nest.

I do not taink so much of this last case, because as the ant carried in a substantial piece of booty in the shape of the fly's leg, it is not surprising that her friends should some of them accompany her on her return; but surely the other two cases indicate a distinct power of communication. Lest, however, it should be supposed that the result was accidental. I determined to try it again. Accordingly, on the following day. I put another large deal fly before an ant belonging to the same nest, pinning it to a piece of cork as before. After trying in vain for ten minutes to move the fly, iny ant started off home. At that time I could only see two other ants of that species outside the nest. Yet in a few seconds, considerably less than a minute, she emerged with no less than twelve friends. As in the previous case, she ran on ancad, and toey followed very slowly and hy no means directly, taking, in fact, near currously enough, seemt. I then removed the pin, and they carried off the fly in triumph. Again, on Jane 15, another ant belonging to the same nest had found a dead spider, about the same distance from the nest. I pinned down the spider as before. The ant did all in her power to move it; but after degrees, however, they all came up and after more persecvering efforts carried off the spider piecemeal.

On July 7 1 tried the same experiment with a soldier of Pheidole megacephala. She pulled at the fly for no less than fift minutes, after which she went to the next and brought five friends experiment with a setly as the Atta had done.

THE FRENCH DETECTIVES.

From The Pail Mall Gazette.

It is to the credit of the French detectives, too, that their espris de corps is extremely high, and that tasy have intense pride in the honorable traditions of the force. Their self-respect is the stronger described into Turning from the easels to the walls one sees many familiar objects. Here are all the studies for the celebrated equastrian portrait Carolus Duran painted of his sister-in-law. Midle, Croizette, of the Comedie Franzaise; here is the famous portrait of his daughter—one of his very greatest efforts; here are the foils model worthy of a Velasquez; here are the foils. led to altercation, perhaps to a conflict, bold of which the police officers are strictly enjoined to avoid. Our detective decided instantly upon a plan, and rushing up to his victim claimed him londly as a nephew. "Come out, my dear loy, come out. I have some excellent news to give you from your dear aunt," he criest and led the other, vainly protessing, into a passage where the capture was quietly but effectually made. Another had pursued his game across the frontier, and came upon the man he wanted as he was calmly dynshing, some way out of the town. To arrest him there would have been difficult, possibly dangerous and the officer would not run the risk. Instead of

there would have been difficult, possibly dangerous, and the officer would not run the risk. Instead of that he entered into conversation, expressed delight at coming across a compatriot, and presently asked him to dine. The same night the emprit was lodged without any contretemps in a Beigian maison distret.

M. Mace, the present head of the sweet, carries worthing the mantle of such distinguished predecessors as MM. Allard, Jacob, and Claude. M. Mace has devoted his whole life to police service and has worked always with conspicuous success. Mace has devoted his whole life to point service and has worked always with conspicuous success. As a commissaire de police he gave early proof of what Edgar Allen Poe styles analytical power. M. Mace's investigation of the murder of M. Linotte, whose body was discovered in a well in the Rus whose body was discovered in a well in the Rus-Princesse, was a masterpiece of constructive reasoning, and gave early proof of his value as a detective-officer. Now, as Chef de la Surete his whole heart and soul is given to his work. It is easy to tell his peculiar gifts at a glance. He has evidently great powers of concentration, and the moment he speaks to a person gives him his close individual attention. He has a singularly keen, individual attention. He has a singularly seri-penetrating eye-as wift intellect which receives, assimilates, sifts, and utilizes with great rapidity all the facts brought before him. With his Friends and those recommended to him he has a most genu-ine winning address, and it is easy to understand that this frank, charming manner is of great service to him in the cross-examination of persons not upon their guard. If his naire inspires terror, as it clearly should, with the dangerous classes, M. Mace is at the same time extremely popular among honest folk within and without the Prefecture.

POPE LEGS KIND FACE.

Roman Letter to The Chicago Times.

At last all the others were gone, and we knelt at the feet of the Pope while a monsignore in violet silk leaned over and read him our names. I was surprised at the gential expression of his face, the kindimess of his keen black eyes, so poorly portrayed in his photographs, His robe was of white cashmere, a gold chain hing around his neck, and on his head was a white skullcap, fringed by his silvery hair. His feet in their crimson slippers rested upon a cushion, and people kissed the gold cross that was embroidered upon them. He sat in an armed chair, upon which was thrown a scirlet cloth, and an attendant in the background waited with his white mantle and crimson velvet hat corded with gold. The marchesa held his hand and spoke with him for several minutes, and then he turned and extended it to me, and I kissed the large amethyst of his ring, and looked up into his kindly eyes.

ns kindly eyes.
The marchesa having repeated that I was an American, and that I desired his blessing for mysolf and all the family, he laid his hand upon my head, and, turning to her, said: "An American, and how then did you come to know her?" "Holy Father, she lives in my house," was the reply. "She is good," added his Holmess, with a merry smile in his good," added his Flotiness, with a merry storie in his eyes, and I, not wishing to rest under fa'se pretences, said: "Bectissime Padre sone Protestanta," whereupon he made a little wry face, lamphed, shook his head at me, and laid his hand in blessing upon my head a second time. I took contrage, raised the rosaries, and he covered them with his hand. Then we went away, and I saw him heave a sigh of weariness. It must indeed be very fatiguing to see so many people. I have been informed since that 200 persons were presented that day, and Pope Leo is far from strong. He has recently been ill and his voice trembles from weakness, his hands are unsteady, and altogether his extreme feebleness is sponered to every one.

RELIGIOUS INTELLIGENCE.

ONE OF MR. MOODY'S STORIES .- Mr. Moody'

ONE OF MR. MOODY'S STORIES.—Mr. Moody's work in San Francisco has been conducted on the same general plan which he has adopted in other cities, and accordingly has presented no novel features. The audiences have been large, and Mr. Sankey's singing has been of great service in maintaining public interest in the revival. One of the secrets of Mr. Moody's power is his ability as a story-teller. This is well illustrated by this extract from one of his addresses in San Francisco: "When I was a young man, before I left my native town, I was at work in the field one day in company with a addresses in San Francisco: "When I was a young man, before I left my native town, I was at work in the field one day in company with a neighbor of mine. All at once I saw him begin to weep. I asked him what the trouble was. He then told me a suange story—strange to me then, for I was not at that rime a Christian. He said that his mother was a Christian when he left home to seek his fortune. When he was about starting his mother took him by the hand and spoke these parting words: 'My son, seek ye first the kingdom of God and His righteousness, and all things else shall be added unto thee.' 'Thia,' said be, 'was my mother's tavorite text.' When he got into the town to which he was going, he had to spend the Sabbath there. He went to church, and the minister took this very text: 'Seek ye first the kingdom of God.' He thought it very strange. Well, he said he would not seek the kingdom then; he would wait until he got a start in life, until he took this very text: 'Seek ye first the kingdom of God.' He thought it very strange. Well, he said he would not seek the kingdom then; he would wait until he got a start in life, until he got a farm and some money. Yet that text troubled him. Again he went to church, and to his amazement the sermon was on the very same text. He did not attend church far some type. At last he was induced again to criter the time. At last he was induced again to enter the church, and behold, he heard the preacher take that very same text. He thought then it was God speaking to him, that his mother's prayers were being answered. But he coolly and de-liberately made up his mind that he would not be a Christian. 'I have never heard any sermon be a Christian. 'I have never heard any sermon since,' said he, 'that has made any impression on me.' I was not a Christian myself then, so I didn't know how to talk to him. The time came for me to leave home. I went to Boston, and there I became a convert. When I got to be a Christian, the first thing that came into my print was that man. I made my my animal was that man. mind was that man. I made up my mind to try to bring him to Christ. When I came home, I mentioned the name to my mother, and asked if he was living. 'Is he living i' she exclaimed. 'Didn't I write to you about him?' Write me what?' Why, that he had gone out asker if he was it is a claimed. 'Didn't I write to you about him?' Write me what?' Why, that he had gone out of his mind and is now in the Insane Asylum.' When I got up there, he pointed his finger at me. Says he: 'Young man, seek ye first the kingdom of God.' He had never forgotten the kingdom of God.' He had never forgotten the text. Although his mind was shaftered and gone, the text was there. The next time I re-turned home my mother told me be was at home there do nome my mother to d me be was at nome idiotic. I went to the house to see him, and there was that vacant look in his eye. I said: 'Do you know me'? He pointed his finger at me, and said; 'Young man, seek ye first the kingdom of God.' God had driven that text into his mind, but his reason was gone. The next time I returned home he was dead, and when I visited my father's grave I noticed a new grave-stone had been put up. I stopped to read it, and found it was my friend's. The and I seemed to hear it whispering the text:
Seek ye first the kingdom of God." This
extract gives Mr. Moody at his best. A RITUALIST'S FAREWELL.-The Rev. J.

Knox-Little, the English Ritualist, preached his farewell sermon at the Church of the Advent, Boston, last Sunday. He spike of the intellec-tual difficulties in the way of understanding divine touth. "The intellect," he remarked. divine truth. "The intellect, he remarked, "comes from God, and is a power of itself; the pressure which comes from intellectual capacity is unbounded. But the danger from intellect s, that it imagines that there is no field into is, that it imagines that there is no field into which it may not enter. But there is a sphere where it cannot enter, and where it is as a baby in the first moments of its efforts to speak. There is a sphere of sputtual life, and though the intellect may come to the limit of that sphere of faith, yet it cannot put foot beyond it. It has to ask humbly divine faith to be its guide. But it refuses to do so, and the result is what in England, in fashionable slang, is called agnosticism. Its ground is to assert that there is no knowledge of spiritual things, a position that is irrational, because it deales truths of which it is as conscious of as of the pyramids. The intellect says there may be bounds where it canno but it has the power to see where stands and to verify its position. But the intel lect turns away from the mediatorial fact which is the central truth of the church of the Redeemer. It bews out the eternal God as manifested in the eternal Word. It makes Christ a lusus natures, a flickering picture of light and shadow, a chiaroscuro, neither exactly must have been God or an imposter, or he tan-cied he was God, and therefore was insane. It would have been blashbury of a degrading kind to assert that he and the Father were one if they were not one in the sense in which the Church maintains that they are. His disciples thought that he was God, and they certainly were near enough to him to know what he meant a searchest. by his assertions. A great poet and philosopher of England has said to me, 'Unitarianism is spiritual insanity.' Paul was a clear thinker, spiritual insanity.' Paul was a clear thinker, and he asserts Christ to be God. It is more likely that they knew the truth than that it was found for centuries afterward at the time of the Arian controversy, and that that error has een revived in the mineteenth century by

CHRISTMAS BEFORE CHRIST .- Bishop Coxe. of Western New York (Protestant Episcopal Church), does not consider it beneath his dig-nity to preach to children. The Sunday-School Times publishes an admirable address by him on a Christmas theme in which he traces a resemblance between the yearly feasts of the Jews and the modern holiday feativals. "In the first place," he says, "all the family had to be present, it possible. David says to Jonathan: 'My brother hath commanded me to be than: My brother hain commanded the to be there. . . let me go away, I pray thee, and see my brethien. It is very pretty to observe how this brother was anxious to please his old father, and so had sent a message to David not to be absent, even though he was now in the service of King Saul. Nothing must keep him from coming and gladdening the heart of their dear old tather, who wanted to see all his children -just as your fathers and mothers want to see you all at home and to make you all happy at this season, in our days. Then, you will wonder whether they had Christmas trees there in Jesse's house; and I answer that they had something like it, in all probability; for how did those old Israelites keep their feast days? They had a teast of tabernacles, answering in many respects to our Christmas, when they were commanded to make booths, or httle were commanded to make booths, or little tents out of the branches of trees, and to keep the feast in them. 'And thou shall rejoice in thy feast,' says the law. 'And ye shall take you on the first day the boughs of goodly trees, branches of palm-trees, and the boughs of thick trees, and willows of the brook, and ye shall rejoice before the Lord your God." I am sure you will say all this looks very much like Christmas, and if that was the way Jesse kept his holidays with his tamily, they had mething like a Christmas tree there in Beth lebem, three thousand years ago."

Cuitarianism.

The Rev. Reuben Jeffery, D. D., who has recentiv left Brooklyn and accepted a call from a Baptist Church in Denver, Col., has been warmly welcomed to his new home. His first warmly was a familiar talk with the church, intended to secure a fair understanding at the start between paster and people; and from the start between pastor and people; and from the smiles of approval with which it was re-ceived, and the cordial hand-shaking at the close, it might be interred that the views ex-pressed were approved. Dr. Jeffery paid a warm compliment to his predecessor, the Rev-Dr. Edis, remarking that he had great respect for a church the members of which spoke so kindly of its former pastor. The church is far too small to accommodate all who desire to attend. The financial condition of society is very encouraging. They are not only tree from debt, but own a fine lot of land on the corner adjoining their church edifice, and have \$14,000 deposited in bank.

Archbishop Wood, of Philadelphia, is Archbishop Wood, of Philadelphia, is endeavoring to raise \$50,000 to pay the debt upon the cathedral, to erect a new marble altar, and to renovate the interior of the edifice. Last Sanday night the result of a single collection was accounted as follows: Cash contributions, \$701 25; subscriptions by promises, \$20,055 50; total cash and subscriptions. \$2,085 50; total cash and

\$2,786 75. Archbishop Wood thanked the congregation for their efforts, and expressed the belief that in a short time, with vigorous work, the required amount would be forthcoming. He said there were many who would give treely, who had not attended the meeting. In addition to these contibutions be expected material assistance from various churches is the Archdiocese.

The congregation of St. Paul's Universalist Church, Chicago. are determined to keep their pastor, Dr. W. H. Ryder, from going to New-York (Church of the Divine Paternity). They have promised to pay the debt of \$50,000 on the church if he will remain in Chicago, and have already taken steps to raise the money. On Sunday last he made this proposition to his congregation: "I will give you until the first day in January next to complete the subscription to pay the entire indebtedness of St. Paul's Church. If at that time the payment of the indebtedness is satisfactorily gnaranteed, proindebtedness is satisfactorily guaranteed, provided for, I will accede to your request, and remain your pastor; if it is not, I shall at that time resign the charge, which I shall have held just twenty-one years."

Mr. Moody's seminary at Northäeld seems to be prospering. The Indian girls mingle freely with their winte sisters, there being little social difference. Without an exception they enjoy their Northern home, and do not wish to return to the ferritory. They will ultimately go back as teachers of their nation. There are three tribe represented, the Creek Cherokee, and tribes represented—the Creek, Cherokee, and Choctaw. Fourteen is the whole number. In Choctaw. Fourteen is the whole number. In the beginning of such a school as this is to be, there are many needs, but none more absolute and imperative than a library. Those reference books to spare would aid the Those having tion greatly by giving them to it; and appre-ciation and interest in Mr. Moody's philan-thropic work could be well shown by contribu-tions of money as well as books.

The Supreme Court of Madrid has recently confirmed, as in conformity with the spirit of the Constitution and the Ministerial circulars, two sentences of the tribunals in Catalonia, the first condemning to two months' imprisonment a man who had refused to take his hat off on meeting a religious procession of the State Charch in the street; and the second to two months' correctional imprisonment a minister who had delivered an address to some peasants assembled in a threshing yard, and after the address had distributed tracts. These acts the Supreme Court holds to be public manifestations contrary to the State religion, and forbidden by the legislation of the Restoration exactly as the hawking of Bibles and tracts and the meetings of Protestants outside regularly-authorized places of worship are prohibited.

The Prussian Government profess hopeless-The Pruss an Government process with the Vatican. Their last Ecclesiastical Bill, they say, afforded the means of concluding a peace, but by the rejection of that measure the materials. rial at the disposal of the Government for paying the way to an ultimate arrangement was totally demolished. The Ministry, therefore, decline all responsibility for taking no further action in the master. They would now assume an expectant attitude, while administering the existing large with an indulgant hand. That is existing laws with an indulgent hand. That is a plain intimation to the Vatican authorities that the next step must be taken by them.

The Christian Advocate thinks that the reason for the decline of some important churches is that the official members are without genuine sympathy with the majority of the gation. People begin to feel that they are ignored; then that they are not desired; then they go elsewhere or remain at home. A little (houghtfulness and brotherly kindness on the part of the men and women of position and leadership would prevent this.

Several secessions to Rome are announced from the South Seas. Dr. Duft, son of the late Moderator of the Presbyterian Church, has, it is announced, with his wife and tanally, been reannounced, which is write and charch in New-ceived into the Poman Catholic Church in New-Zealand. Five Wesleyan ministers at Dun-din have applied to the bishop for ordination. He has ordained one, and the others are on proba-

The Roman Catholic papers in Madrid assert The Roman Catholic papers in Madria assert that a learned local physician has discovered that the figure on the crucifix in Burgos Cathedral is a human body in a perfect state of preservation, and without a sign of decomposition. It is said to have been there since the middle of the eleventh century.

The International Committee of the Young Men's Christian Associations have published a list of "three hundred topics for the prayer meetings of 1881." It is intended for the use of pastors, Association secretaries, and others active in Christian work.

CHRRENT RELIGIOUS DISCUSSION.

GRAMMAR OF CHRISTIAN UNION.

From the Church Union.

A grammar does not necessarily imply a set of rules and directions, for rules and directions are but the appetiation of principles. Still, as tules may be called for, we will lay down a few of them: I. Confess and deplore the evils of divisions among Christians. II. Pray for clurch union, in submission to Goo's will as to the manner and time. III. Strive for church union (1) By abstanting from any acts that fend to create new at increase the ranger of old divisions; (2) By directing attention to points of agreement between the different denominations; (3) By endeavoring in conversation, and by distributing publications on the subject, to enlist others in the cause, IV. Bear and forbear. V. Be willing to sacrifice fancies and preferences for the sake of union. VI. Extend to others the toleration you desire for yourself. VII. Adopt the ancient motto, "In essentials unity; in non-essentials liberty; in all things charity."

PROTESTANTS AND MODERN MIRACLES.

From the New York Observer.

If Dr. Tyng has been misinderstood, we would be very glad to have his explanation of the extraordinary sentiments attributed to him. His remarks as reported in the papers have been reprinted in a thousand journals to the grief of Christians and the paper that the papers. We do not suppose that he beas reported in the papers have been reprinted in a thousand journals to the grief of Christians and the low of the enemy. We do not suppose that he believes in that stuff. Mr. Joseph Cook disclaims being a Spiritualist. But both of these public teachers, by incantions generalizations, without facts sufficient to justify their conclusiors, have given the countenance of Evangelical Christianity to that which we, and we hope they, regard as humbug. We yield to no one in faith in the readiness of God to hear prayer. But we do not believe that prayers to the Virgin Mary avail more than prayers to any other virgin. Nor have we the least evidence that one cure has been effected at Lourides, Knock, Springfield or Boston, except by the operation of natural causes easily explained without supposing a miracle. There is a large class of nervous allocates by which people are prostrated for years, lame, deaf, blind, palsied. All these and many other ills may naturally and suddenly yield to the impulse of atrong emotion, as when hopelessly bedridden people have found the use of their legs at the cry of fire, it was not a miracle that set them up. But if a man with only one leg goes to Knock and comes back with two, the other having grown out while he was gnocking around Knock on one, we will think better of the Knock miracles. No such wouder, nothing knocking around Knock on one, we will think bet-ter of the Knock miracles. No such wonder, nothing of that sort is claimed for the Virgin in the way of

ATTENDANCE AT CRURCH.

From Tre Methodiat.

Dr. W. C. Willing, Presiding Elder of the Chicago District, recently remarked that the attendance at Methodist churches in that city has largely increased. This gratifying fact may be true of other towns, but we constantly receive letters stating that the attendance is far below the capacity of the churches; and we believe that our correspondents cannot be mistaken, for their observation is confirmed by our own. The point of lack is, that there is not enough work done outside of the churches. Multitudes do not attend upon public worship. These multitudes must be reached by some outside work. The Episcopalians have done a great work by means of their organizations of woman workers, the result of which is seen in the larger audiences at their churches. Some kind of work Methodists must do in order to fill their empty pews with worshippers.

ADVICE TO A CHARITY OFFICER.

From The Christian Union.

The Rev. C. P. Woodruft, the superintendent of the New-York Protestant Episcopal Mission, should be called to a sharp account by his society. Mr. French, the missionary of this seciety on Blackwell's Island, having been called as a witness before the Senate Committee, who were investigating the Binexwell's Island institutions, was instructed by a most extraordinary letter from his superintendent that he had no business to testify before the committee at all, for he was not supposed to know anything in regard to the abuses, if any, existing in the asylum. "You are there," said the superintendent, "only to care for the spiritual welfare of the inmates, and nothing more." Mr. Woodruff should take a day of leisure, and read his four Gespeis, He would there find that Christ has taught his ministry throughout all time that the only way to care lum and keep silence respecting them.